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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,731	09/18/2001	Jeffrey J. Fitzgerald	CCI-004	7660

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EXAMINER

PUENTE, EMERSON C

ART UNIT	PAPER NUMBER
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2113

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/954,731

Applicant(s)

FITZGERALD, JEFFREY J.

Examiner

Emerson C Puente

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This action is made Non-Final. Claims 1-22 have been examined.

Drawings

This application, filed under former 37 CFR 1.60, lacks formal drawings. The informal drawings filed in this application are acceptable for examination purposes. When the application is allowed, applicant will be required to submit new formal drawings. In unusual circumstances, the formal drawings from the abandoned parent application may be transferred by the grant of a petition under 37 CFR 1.182.

Claim Objections

Claim 13 and 22 are objected to because of the following informalities:

In regards to claim 13 and 22, please indent the second line for each claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 and 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,831,512 of Nakai et al. referred hereinafter “Nakai”.

In regards to claim 1, Nakai discloses:

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generating an active message for processing by the active processor domain (see column 2 lines 40-45 and column 5 lines 19-23);

generating a modified active message by providing an active time indicator associated with the active message for at least one process of the plurality of processes (see column 2 lines 63-66 and column 5 lines 19-23); and

determining the status of the active processor domain in response to the modified active message (see column 6 lines 20-58).

In regards to claim 2, Nakai discloses:

wherein the step of determining the status of the active processor domain is responsive to the active time indicator (see column 6 lines 20-58).

In regards to claim 3, Nakai discloses:

wherein a respective active time indicator is associated with each process of the plurality of processes, and wherein the step of determining the status of the active processor domain is responsive to more than one of the active time indicators (see column 4 lines 1-8 and column 6 lines 20-58).

In regards to claim 4, Nakai discloses:

wherein the active time indicator comprises a time-stamp indicating the time the at least one process completed processing the active message (see column 4 lines 35-40).

In regards to claim 5, Nakai discloses:

wherein the active time indicator comprises a time-stamp indicating the time elapsed while the at least one process processed the active message (see column 6 lines 34-40).

In regards to claim 6, Nakai discloses:

wherein the step of determining the status comprises; determining a statistical characteristic of the active processor domain; and determining the status of the active processor domain in response to the statistical characteristic (see column 6 lines 45-55).

In regards to claim 7, Nakai discloses:

wherein the step of determining a statistical characteristic comprises generating a time average of the duration of the at least one process of the plurality of processes for a plurality of active messages (see column 6 lines 45-55).

In regards to claim 13, Nakai discloses:

an active processor domain, the active processor domain having at least one processor, the at least one processor executing at least one process, the at least one process receiving an active message and generating a modified active message in response thereto (see figure 2 and column 2 lines 63-66 and column 5 lines 19-23);

a time-stamp mechanism in communication with the at least one process and for providing an active time indicator for use in generation of the modified active message (see column 2 lines 63-66 and column 5 lines 19-23);

a redundancy manager in communication with the active processor domain, the redundancy manager determining the status of active processor domain in response to the modified active message (see column 6 lines 20-58)....

In regards to claim 14, Nakai discloses:

wherein the redundancy manager determines the status of the active processor domain in response to the active time indicator (see column 6 lines 20-58).

In regards to claim 15, Nakai discloses

wherein the active time indicator comprises a time-stamp indicating the time the at least one process completed processing the active message (see column 4 lines 35-40).

In regards to claim 16, Nakai discloses

wherein the active time indicator comprises a time-stamp indicating the time elapsed while the at least one process processed the active message (see column 6 lines 34-40)

In regards to claim 17, Nakai discloses

wherein the redundancy manager determines a statistical characteristic of the active processor domain and determines the status of the active processor domain in response to the statistical characteristic (see column 6 lines 45-55).

In regards to claim 18, Nakai discloses

wherein the statistical characteristic comprises a time average of the duration of the at least one process (see column 6 lines 45-55).

In regards to claim 22, Nakai discloses:

means for executing at least one process in an active processor domain configured to receive an active message and generate a modified active message in response thereto (see figure 2 and column 2 lines 63-66 and column 5 lines 19-23);

means for time-stamping in communication with the at least one process, the means for time-stamping generating an active time indicator for use by the means for executing (see column 2 lines 63-66 and column 5 lines 19-23); and

means for the status of the active processor domain in response to the modified active message (see column 6 lines 20-58).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakai in view of US Patent No. 6,073,089 of Baker et al. referred hereinafter "Baker".

In regards to claim 8 and 19, Nakai fails to explicitly disclose:

wherein the statistical characteristic comprise a standard deviation from the time average.

Baker discloses using standard deviation to detect faults or errors (see column 4 lines 15-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made wherein the statistical characteristic comprises a standard deviation from the time average. A person of ordinary skill in the art at the time the invention was made would have been motivated because Nakai discloses determining an error or fault (see column 6 lines 20-30), and standard deviation, as per teaching of Baker, is known and used method to indicate an error or fault (see column 4 lines 15-33).

Claims 9-12 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakai in view of US Patent No. 5,544,077 of Hershey.

In regards to claim 9, Nakai discloses all the claimed subject matter except a stand-by processor domain, the stand-by processor domain comprising a plurality of stand-by processes; and generating a modified stand-by message by providing a stand-by time indicator for at least one process of the plurality of stand-by processes in the stand-by domain.

However, Hershey discloses a standby running the same program as the primary, wherein if the standby senses the primary failing, the standby is switchover to perform the functions of the primary (see column 2 lines 30-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Nakai to have a standby running the same programs as the primary or active, indicating the stand-by processor domain comprising a plurality of stand-by processes and generating a modified stand-by message by providing a stand-by time indicator for at least one process of the plurality of stand-by processes in the stand-by domain. A person of ordinary skill in the art at the time the invention was made would have been motivated because Nakai discloses detecting errors or fault (see column 6 lines 20-30), and having a standby, as per teachings of Hershey, allows for continued processing in the event of failure of the primary or active (see column 2 lines 40-45).

In regards to claim 10, Hershey discloses a standby that runs the same programs as the primary or active (see column 2 lines 30-45). Since Nakai discloses determining the status of the active processor domain is responsive to the active time indicator, Nakai

in view of Hershey discloses determining the status of the stand-by processor domain is responsive to the stand-by time indicator.

In regards to claim 11, Hershey discloses a standby that runs the same programs as the primary or active (see column 2 lines 30-45). Since Nakai discloses wherein a respective active time indicator is associated with each process of the plurality of processes, and wherein the step of determining the status of the active processor domain is responsive to at least two of the active time indicators (see column 4 lines 1-8 and column 6 lines 20-30), Nakai in view of Hershey discloses a respective stand-by time indicator is associated with each process of the plurality of stand-by processes of the stand-by domain and the step of determining the status of the stand-by processor domain is responsive to at least two of the stand-by time indicators.

In response to claim 12, Hershey discloses transforming the active processor domain to the stand-by processor domain in response to the modified active message (see column 2 lines 40-45).

In regards to claim 20, Nakai discloses all the claimed subject matter except a stand-by processor domain, the stand-by processor domain having at least one processor, the at least one processor executing at least one stand-by process, the at least one stand-by process receiving a stand-by message and generating a modified stand-by message in response thereto, and wherein the redundancy manager determines the status of the stand-by processor domain in response to the modified stand-by message.

However, Hershey discloses a standby running the same program as the primary,

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wherein if the standby senses the primary failing, the standby is switchover to perform the functions of the primary (see column 2 lines 30-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Nakai to have a standby running the same programs as the primary or active, indicating a stand-by processor domain, the stand-by processor domain having at least one processor, the at least one processor executing at least one stand-by process, the at least one stand-by process receiving a stand-by message and generating a modified stand-by message in response thereto, and wherein the redundancy manager determines the status of the stand-by processor domain in response to the modified stand-by message. A person of ordinary skill in the art at the time the invention was made would have been motivated because Nakai discloses detecting errors or fault (see column 6 lines 20-30), and having a standby, as per teachings of Hershey, allows for continued processing in the event of failure of the primary or active (see column 2 lines 40-45).

In regards to claim 21, Hershey discloses wherein the redundancy manager further comprises a control determination module, the control determination module transforming the active processor domain into the stand-by processor domain in response to the modified active message (see column 2 lines 35-45).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See Form PTO-892.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emerson C Puente whose telephone number is (703) 305-8012. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5631.

Emerson Puente
4/28/04


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